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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,104	04/03/2006	Rainer Scharp	SCHARP6PCT	5054
25889	7590	10/11/2007		
WILLIAM COLLARD COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER MCMAHON, MARGUERITE J	
			ART UNIT 3747	PAPER NUMBER
			MAIL DATE 10/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/570,104

Applicant(s)

SCHARP, RAINER

Examiner

Marguerite J. McMahon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed: after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed, in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/1/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

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DETAILED ACTION***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (6,003,479) in view of Sougawa (4,969,433), Howes (5,056,681), and Clary (3,430,969). Evans shows a piston having a basic body whose one face forms a piston head 52 (see Figure 3), pin bosses 72, with pin bore disposed on the underside of the basic body, skirt elements 54 that connect the pin bosses with one another, a ring element 56 disposed in the radially outer edge region of the piston head, which forms a ring-shaped cooling channel 64 with the basic body, the ring element being connected with the basic body by way of a screw connection (see column 2, lines 40-44).

Evans shows everything except the piston and ring element being formed of aluminum and being forged and cast, respectively, the screw connection being sealed by means of a weld seam, and having a ring insert consisting of Ni resist.

Sougawa (4,969,433) teaches that it is old in the art to form the piston from aluminum, and to employ either forging or casting (see column 2, lines 38-40). It would have been obvious to modify Evans by forming the piston from aluminum, since this is a commonly utilized lightweight material, and to employ forging and casting techniques, since these are conventional forming methods in the piston art.

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Howes teaches that it is old in the art to employ welding as a means of sealing a threaded connection (see column 4, lines 44-49). It would have been obvious to one having ordinary skill in the art to modify Evans by employing a welding seam as a means of sealing the threaded connection, in order to prevent fluid leakage.

Clary teaches that it is old in the art to employ a ring insert 18 in the piston, the ring insert being comprised of Ni resist (see column 3, lines 40-43). It would have been obvious to one having ordinary skill in the art to modify Evans by employing a piston ring insert comprised of Ni resist, in order to provide improved wear resistance to the compression ring groove. Note further that it is conventional in the engine art to employ piston ring inserts in the compression ring groove, in order to provide improved wear resistance.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,938,537 in view of Sougawa (4,969,433), Howes (5,056,681), and Clary (3,430,969). U.S. Patent No. 6,938,537 shows everything except the piston and ring element being formed of aluminum and being forged and cast, respectively, the screw connection being sealed by means of a weld seam, and having a ring insert consisting of Ni resist.

Sougawa (4,969,433) teaches that it is old in the art to form the piston from aluminum, and to employ either forging or casting (see column 2, lines 38-40). It would have been obvious to modify U.S. Patent No. 6,938,537 by forming the piston from aluminum, since this is a commonly utilized lightweight material, and to employ forging and casting techniques, since these are conventional forming methods in the piston art.

Howes teaches that it is old in the art to employ welding as a means of sealing a threaded connection (see column 4, lines 44-49). It would have been obvious to one having ordinary skill in the art to modify U.S. Patent No. 6,938,537 by employing a welding seam as a means of sealing the threaded connection, in order to prevent fluid leakage.

Clary teaches that it is old in the art to employ a ring insert 18 in the piston, the ring insert being comprised of Ni resist (see column 3, lines 40-43). It would have been obvious to one having ordinary skill in the art to modify U.S. Patent No. 6,938,537 by employing a piston ring insert comprised of Ni resist, in order to provide improved wear

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resistance to the compression ring groove. Note further that it is conventional in the engine art to employ piston ring inserts in the compression ring groove, in order to provide improved wear resistance.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the piston ring inserts of Bauer, Bischofberger et al, and Kohnert, the threaded and welded connections of Giacomelli et al, Osokin et al, Dunn et al, Hartley, and Chellappa.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marguerite J. McMahon whose telephone number is 571-272-4848. The examiner can normally be reached on Monday-Wednesday and Friday, 10am-6:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Cronin can be reached on 571-272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Marguerite McMahon
Primary Examiner
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